

STATEMENT OF BASIS FOR THE PROPOSED FINAL REMEDY
HSWA PERMIT UNDER THE 1984 HAZARDOUS AND SOLID WASTE
AMENDMENTS TO THE RESOURCE CONSERVATION AND RECOVERY ACT
ASHLAND INC., JACKSON, HINDS COUNTY, MISSISSIPPI
EPA ID NUMBER: MSD 000 829 150

INTRODUCTION

This Statement of Basis was prepared pursuant to Title 40 of the Code of Federal Regulations (C.F.R.) Section 124.7 for a permit reissuance by the United States Environmental Protection Agency, Region 4 (EPA) to Ashland Inc. (Ashland), the owner and operator of a hazardous waste facility located at 455 Industrial Drive, in Jackson, Hinds County, Mississippi (“the Facility”).

The EPA is issuing this Statement of Basis for a Final Remedy/Corrective Measures at the Ashland Facility consistent with the public participation provisions of the Resource Conservation and Recovery Act (RCRA), and the Hazardous and Solid Waste Amendments of 1984 (HSWA). The purpose of this document is to solicit public comment on this draft Permit and Corrective Measures proposal. The EPA will make a final decision on necessary corrective action after evaluating any information received during the public comment period.

The EPA is proposing a number of site-wide Corrective Measures to address contaminated soil and perched/accumulated water¹ at the Facility that was caused by the release of hazardous wastes and hazardous constituents. The Final Remedy includes the following: (1) Monitored Natural Attenuation (MNA) of the contaminated perched/accumulated water; (2) a Site Management Plan (SMP) to control future subsurface construction and/or maintenance at the Facility; (3) an Environmental Covenant to (a) compel the continuation of commercial/industrial land use at the Facility, (b) prevent the use of perched/accumulated water and groundwater and the installation of wells at the Facility, and (c) prevent the subsurface demolition, excavation, or other subsurface activities except in accordance with the SMP; ; and (4) Facility maintenance and inspection requirements. These proposed Corrective Measures are discussed in more detail below.

The previous Ashland HSWA Permit was issued on February 1, 2001. That permit expired in 2011, but was administratively continued because a renewal application was timely submitted. By this action, the EPA is proposing to renew the HSWA Permit for another ten (10) years.

¹ Perched/accumulated water refers to a layer of shallow groundwater above the water table.

PERMIT PUBLIC NOTICE

The EPA is soliciting public review and comment on this draft HSWA Permit and the proposed Final Remedy at the Facility.

The regulations at 40 C.F.R. § 124.10 require that a 45-day comment period be instituted for this draft permit. The public comment period for this draft HSWA Permit and Statement of Basis, outlining the proposed Corrective Measures, will begin on 01/09/14 and will end forty-five (45) days thereafter on 02/24/14.

Persons wishing to request a public meeting or to comment on the proposed Corrective Measures and permit conditions should submit such requests or comments in writing to:

Mr. John Allison
USEPA Region 4
61 Forsyth Street, SW
Atlanta, Georgia 30303
Phone: (404) 562-8490
Email: allison.john@epa.gov

Depending on the scope of the comments received during the public comment period, the EPA may schedule a public meeting to clarify any details of the Corrective Measures at the Facility and to answer any further questions from the community.

The draft HSWA Permit, the RCRA Facility Assessment Report (RFA), Confirmatory Sampling (CS) Reports, RCRA Facility Investigation (RFI) Reports, Quarterly Monitoring Reports, Corrective Measures Study (CMS) Report, Revised Final CMS Report/Final Remedy Proposal, Corrective Measures Implementation Plan (CMIP), and other documents are available through the Facility from Mr. Vince Saleski, or through the EPA from Mr. John Allison.

Please contact:

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Additionally, the Statement of Basis and draft HSWA Permit will be available on the EPA Region 4 website and at the Lou Hamar Library:

<http://www.epa.gov/region4/rcra/PublicNotices.htm>

The Eudora Welty Library
300 North State Street
Jackson, MS 39209
(601) 968-5811

After the EPA considers all public comments received during the public comment period, the EPA will summarize and respond to such comments in a Final Decision and Response to Comments document. The Final Decision and Response to Comments document will be incorporated into the final HSWA Permit and the Administrative Record. The final permit decision shall become effective thirty (30) days after service of notice of the Final Decision to Ashland, unless a later date is specified or review is requested under 40 C.F.R. § 124.19. If no comments are received requesting a change in the draft Permit, the final Permit shall become effective immediately upon issuance.

1. FACILITY BACKGROUND

A. Site Description

Ashland operated a bulk chemical product storage and distribution center at the Facility from 1968 to 2009. The site occupies an approximately 6.28-acre tract of land within the Hawkins Field Industrial District of northwest Jackson, Mississippi, and is zoned for industrial/commercial use (Figure 1). During World War II, the Hawkins Field was a military airport. Unusually thick, concrete pads constructed by the military remain on the property. Major site features include an office building, product storage warehouse, aboveground storage tank farms, and a covered truck loading/unloading area. Unlined stormwater swales are located adjacent to the north, east, and south sides of the site. The property is bordered by industrial and commercial facilities to the north, Industrial Drive to the east, by the Gulf, Mobile and Ohio Railroad right of way to the west, and by commercial warehouse buildings to the south. Residential communities are located to the west and southwest at distances of 750 feet (ft.) or more. Perched/accumulated water in an approximately 2-acre portion of adjacent property, owned by Trustmark National Bank (Trustmark), has been impacted by contamination that has migrated off site.

B. Waste Management History

Ashland formerly operated its Industrial Chemical and Solvent, General Polymers, and Environmental Services Division at the Facility. The Facility received both liquid and dry bulk packaged industrial chemicals in truck and railcar shipments. These chemicals, stored at the Facility's bulk product storage warehouse, were transferred, blended, and repackaged into containers, tanker trucks, and vans for transport to area industrial customers. Several hazardous and nonhazardous wastes were generated at the Facility (including solvents, acids, and caustics) from solvent and acid drumming operations, the flushing of product lines and pumps, cleaning

operations, and from drippage and inadvertent spills of product. No industrial chemicals or solvents were manufactured nor vehicles maintained at this location.

Ashland also provided waste management services to customers within a 30-mile radius by picking up small quantities of drummed hazardous and nonhazardous wastes, storing the drummed wastes until truckload quantities of similar wastes accumulated, and then transporting the wastes to an approved waste treatment or disposal facility. The wastes were stored in Department of Transportation-approved containers within either the warehouse's former nonhazardous waste container storage area or the Hazardous Waste Storage Area (Solid Waste Management Unit 1 (SWMU 1)), the Facility's only RCRA-regulated treatment, storage, or disposal unit. Hazardous wastes typically managed at the Facility included: spent organic solvents, off-spec solvents, discarded commercial products, inorganic corrosives, waste sludges, plating wastes (containing copper, arsenic, cyanides, nickel, and chromium), and water-based leaded ink. These hazardous wastes include both characteristic and listed wastes as follows: ignitable wastes (D001), corrosive wastes (D002), toxic characteristic wastes (D004 through D043), halogenated wastes (F001, F002), toxic ignitable wastes (F003, F005), toxic non-halogenated wastes (F004), toxic plating wastes (F006, F007, F010, F019), source-specific wastes (K086), and discarded, obsolete, or off-specification commercial products (U-listed wastes).

Railcar shipments ceased in May 2006, and Ashland ceased operations in 2009. On January 24, 2013, the Mississippi Department of Environmental Quality (MDEQ) approved Ashland's closure of the Hazardous Waste Storage Area (SWMU 1). No post-closure care is required.

Ashland currently maintains ownership of the Facility; however, since November 7, 2011, the property has been leased to January Environmental Services, Inc. (JES) which plans to use the property for collecting and storing used oil before shipping the oil off-site for recycling. JES is not currently operational at this time. If JES begins operations at the Facility, a permit modification will be required to add JES as a co-permittee with Ashland.

C. Environmental Setting

The Facility is located in Hinds County, Mississippi, which has a warm, temperate climate with long summers and short winters. The mean annual precipitation is 51 inches (in.), distributed throughout the year. This precipitation recharges the on-site perched/accumulated water, a layer of trapped groundwater above the water table.

During site investigations, perched/accumulated water was encountered in several monitoring wells, completed through thick sequences of sandy backfill material and reworked native soil material. The first regional groundwater occurs in the Cockfield Formation at approximately 130 ft. below ground surface (ft-bgs).

Ground cover on-site (paving, gravel and landscaped grass) inhibits surface water contact with site soils and infiltration. Additionally, the Solvent Tank Farm Area (Area of Concern

(AOC) E), Former Acid Drumming Station (SMWU 4A), Acid Drumming Station (Current Acid Drumming Station) (SWMU 4B), and Railcar Unloading/Loading Area (AOC C) have either secondary containment or are diked to prevent stormwater from leaving these areas and flowing off-site to the adjacent stormwater swale. Stormwater collected in these areas is inspected prior to being manually discharged.

D. Regulatory History

In 1996, the EPA conducted a RCRA Facility Assessment (RFA) at the Facility to identify SWMUs and AOCs, and to evaluate their potential for releases to the environment. SWMUs are any units which have been used for the treatment, storage or disposal of solid waste at any time, irrespective of whether the unit is or ever was intended for the management of solid waste. AOCs are any areas having a probable release of a hazardous waste or hazardous constituent which is not from a SWMU and is determined to pose a current or potential threat to human health or the environment. SWMUs and AOCs are the subjects of the corrective action requirements of HSWA.

The EPA issued an RFA Report in 1998 and, in 2001, issued the Facility a HSWA Permit based on the RFA Report, identifying eleven (11) SWMUs and seven (7) AOCs, and requiring confirmatory sampling (CS) at eleven (11) of those units (Figure 2). At the same time, the Facility received a State of Mississippi Hazardous Waste Management (HWM) Permit (No. HW-000-829-150) to regulate its Hazardous Waste Container Storage Area (SWMU 1) that was active at that time. The Facility's SWMUs and AOCs are listed in the following table. The eleven (11) units that required CS are marked with an asterisk.

| SWMU/ AOC | SWMU/AOC Name |
|----------------------|---|
| SWMU 1 | Hazardous Waste Container Storage Area and Non-Hazardous Waste Container Storage Area |
| SWMU 2* | Lime Pit |
| SWMU 3* | Neutralization Pit |
| SWMU 4A* | Former Acid Drumming Station |
| SWMU 4B | Acid Drumming Station (Current Acid Drumming Station) |
| SWMU 5 | Satellite Waste Accumulation Area |
| SWMU 6* | Former Container Rinsing Area |
| SWMU 7 | Equipment Salvage and Laydown Area |
| SWMU 8 | Former Non-Hazardous Waste Storage Area |

| SWMU/ AOC | SWMU/AOC Name |
|----------------------|--------------------------------------|
| SWMU 9A* | Former Acid Drillage Pad |
| SWMU 10* | Stormwater Runoff System |
| SWMU 11 | Trash Dumpster |
| AOC A* | Abandoned Storage Tank Area |
| AOC B ₁ * | Former Truck Loading/Unloading Area |
| AOC B ₂ | Corrosive Truck Unloading Pad Area |
| AOC B ₃ | Solvent Truck Loading/Unloading Area |
| AOC C* | Railcar Loading/Unloading Area |
| AOC D* | Acid Tank Farm Area |
| AOC E* | Solvent Tank Farm Area |

* Required confirmatory sampling

Pursuant to the 2001 EPA HSWA Permit, Ashland conducted a CS program and submitted a “Confirmatory Sampling Program Investigation Report,” dated January 15, 2002, to the EPA to present its findings. The Report determined that the following six (6) SWMUs and AOCs required further investigation:

- SWMU 2 - Lime Pit;
- SWMU 4A - Former Acid Drumming Station;
- AOC A - Abandoned Storage Tank Area;
- AOC B₁ - Former Truck Loading/Unloading Area;
- AOC C - Railcar Loading/Unloading Area; and
- AOC E - Solvent Tank Farm.

Ashland subsequently completed RCRA Facility Investigations (RFIs) Phases I through V to determine the nature and extent of impacts at the site. It was determined between Phases IV and V that the investigation should evaluate the Facility on a site-wide basis, rather than on a SWMU and AOC-specific basis.

Based on the RFIs, Ashland determined, and the EPA agrees, that the release of hazardous waste or hazardous waste constituents occurred at the following SWMUs and AOCs: the Former Acid Drumming Station (SWMU 4A), the Abandoned Storage Tank Area (AOC A), the Railcar Loading/Unloading Area (AOC C), and the Solvent Tank Farm Area (AOC E). Releases from these units contaminated soil and perched/accumulated water at the Facility with chlorinated volatile organic compounds (CVOCs), non-chlorinated volatile organic compounds (VOCs), and semi-volatile organic compounds (SVOCs). The contamination migrated off-site to impact the perched/accumulated water in approximately 2 acres of the adjacent Trustmark property. The

Final Remedy under this HSWA Permit will remediate both the on-site and off-site contamination.

Together, the RFA, CS, and RFI Reports eliminated SWMUs 1, 2, 3, 4B, 5, 6, 7, 8, 9A, 10, and 11, and AOCs B₁, B₂, B₃, and D as sources of significant contamination because either: 1) there was no evidence of releases; or 2) the concentrations of contaminated soil were less than background values, Mississippi Target Remediation Goals (MDEQ TRGs), or the EPA Region IX Preliminary Remediation Goals (PRGs) (now known as Regional Screening Levels (RSLs)) for industrial use. The reports recommended, and the EPA agrees, that No Further Action (NFA) be required at these units.

The State of Mississippi HWM Permit and the EPA HSWA Permit both expired on January 31, 2011, but were administratively continued because Ashland submitted a timely RCRA Part B Permit Renewal Application. However, on December 10, 2012, Ashland withdrew the Mississippi HWM Permit renewal application because it was in the process of closing its regulated unit, the Hazardous Waste Container Storage Area (SWMU 1). This withdrawal terminated the administratively continued Mississippi HWM Permit.

Ashland subsequently closed this RCRA-regulated unit in accordance with the approved Closure Plan by showing there was no evidence of a release since the 2001 HSWA Permit was issued. MDEQ reviewed Ashland's January and February 2012 Final Closure Certification Reports and inspected the Facility for closure in November 2012. In January 2013, MDEQ determined that Ashland closed its RCRA unit in accordance with the MDEQ-approved Closure Plan, and that the former RCRA unit requires no post-closure care.

The EPA's 2001 HSWA Permit governing corrective action at the site remains in effect until the draft HSWA Permit proposed by this Statement of Basis is finalized and takes effect.

2. SELECTION AND DISTRIBUTION OF CONTAMINANTS OF CONCERN

A. Contaminants of Concern

In 2001, Ashland discovered that waste handling practices associated with its operations had contaminated on-site soils and perched/accumulated water above the groundwater table. Ashland investigated the nature and extent of the contamination through the CS and RFI processes and through quarterly monitoring of perched/accumulated water that it started implementing in 2006.

Based on these investigations and on historical data, Ashland determined that the soil and perched/accumulated water were contaminated with CVOCs, non-chlorinated VOCs and SVOCs, and contained the following specific contaminants of concern (COCs): tetrachloroethylene (PCE); trichloroethylene (TCE); cis-1,2-dichloroethylene (DCE); trans-1,2-DCE; 1,1-DCE; 1,1-DCA; 1,1,2-trichloroethane (TCA); vinyl chloride (VC); chloroethane; chlorobenzene; chloroform; chloromethane; benzene, toluene, ethylbenzene, and xylenes

(BTEX); naphthalene; and 1,4-dioxane.

B. Distribution of COCs in Soil

Soil data in the RFI and Quarterly Monitoring Reports determined that activities at SWMU 4A, and AOCs A, C, and E had contaminated soil and fill material in areas proximal to these contaminant sources. The soil and fill material were impacted with CVOCs, non-chlorinated VOCs and SVOCs.

Investigations were conducted for surface soils (0-1 ft-bgs), and subsurface soils (from 1- >10 ft-bgs). For the surface soils, the concentrations of contamination exceeded the EPA Region IX PRGs for industrial sites for PCE, TCE, toluene, and xylene at the following areas: 1) Abandoned Storage Tank Area (AOC A); 2) along the railroad track (near AOC C); and 3) in the loading shed area (near AOC C). The greatest concentrations occurred in the Abandoned Storage Tank Area (AOC A) (PCE and TCE) and along the railroad tracks (near AOC C) (toluene and xylene).

For subsurface soils, collected from 1- >10 ft-bgs, the following five areas exceeded the EPA Region IX PRGs for industrial sites: 1) Abandoned Storage Tank Area (AOC A); 2) along the railroad track (near AOC C); 3) off-site west of the railroad tracks; 4) southeast of the storage tanks (near AOC E); and 5) in the loading shed area (near AOC C). These areas exceeded the EPA Region IX PRGs for PCE, TCE, VC, dichloromethane, toluene, and xylene. The greatest concentrations, which decrease with depth, were in the loading shed area (near AOC C).

The Facility ceased all operations in 2009. As a result, Ashland removed and cleaned the Facility's process and storage areas, and cleaned the concrete containment areas. All above ground sources that could potentially impact soils have been removed.

C. Distribution of COCs in Perched/Accumulated Water (Plume Extent and Migration)

The contaminated soils and fill material on-site have impacted the on-site perched/accumulated water, as well as approximately 2 acres of the adjacent Trustmark property. Ashland has been sampling contaminated perched/accumulated water on an approximately quarterly basis since September 2006. Ashland's monitoring reports show the perched/accumulated water plumes are contained within the Facility toward the north, east and south. The central perched/accumulated water plume extends west onto the Trustmark property.

During quarterly monitoring events from January 2012 – January 2013, Ashland collected and analyzed perched/accumulated water for CVOCs, non-chlorinated VOCs, and SVOCs (naphthalene, and 1,4-dioxane) from monitoring wells throughout the Facility, and the adjacent impacted Trustmark property. The results were generally consistent with or lower than previous sampling events. In general, the extent of the site's contaminant plumes are stable and the contaminant concentrations are generally stable to decreasing.

3. INTERIM MEASURES

Due to the Ashland Facility's small size (6.28 acres) and the proximity of the SWMUs and AOCs to each other, Ashland implemented site-wide Interim Measures to address both the contaminated soil and the contaminated perched/accumulated water. All potential exposures to hazardous constituents in the surface and subsurface soils and perched/accumulated water have been controlled through engineered controls and the Site Management Plan (SMP). The engineered controls include the following:

- The Facility property is enclosed by a fence and gate with controlled access;
- Both the fence and gate signs note that hazardous waste corrective action is occurring;
- The Facility surface is covered with concrete and asphalt paving, gravel, and landscaped grasses; and
- Physical barriers, such as thick concrete dikes, around AOCs C, D, and E, and earthen and concrete lined ditches control stormwater run-off.

Because there are potential risks associated with impacted surface, and subsurface soils and/or perched/accumulated water, which may occur during future excavation or construction activities, Ashland has also developed a SMP to provide guidance for on-site management of subsurface activities. Should future subsurface activities ever occur, the SMP will mitigate potential human exposures and health risks to construction workers and groundskeepers.

In addition, Ashland has been implementing an MNA program at the Ashland and the Trustmark properties from August 2006 to the present. MNA is evaluating the stabilization and long-term degradation of contamination by natural processes, such as microbial degradation. This measure is generally applicable to dissolved water plumes and residual contaminant levels in soils and sediments.

Ashland has demonstrated natural attenuation at the Facility through several lines of evidence, including measuring decreasing concentrations of contaminants in monitoring wells over time, changes in the ratios of parent to breakdown products, and the presence of geochemical indicators of naturally occurring biodegradation. The August 12, 2011, Revised Final CMS Report includes a detailed evaluation of the effectiveness of natural attenuation as a remedial measure for the site's COCs (CVOCs, VOCs and SVOCs) that exceed Target Cleanup Standards (TCSs). The Revised Final CMS also details the process in which the TCS were created using a site-specific, risk-based, approach.

4. RISK ASSESSMENT / CLEANUP GOALS

A. Human Health Risk Assessment

In January 2008, a Human Health Risk Assessment (HHRA) was completed for the Facility to evaluate potential exposure of human receptors to chemical constituents detected in environmental media at the Facility. The objective of the HHRA was to determine whether constituents in environmental media pose unacceptable risks to human health under site-specific exposure conditions based on current and reasonably anticipated future land use.

The overall conclusion of the HHRA was that there is limited potential for human health risks under current and reasonably anticipated future land uses. Under current conditions, potential exposure to surface soil is limited by the existing ground cover and surface paving/barriers. Additionally, because current and future anticipated industrial workers and groundskeepers do not engage in subsurface disturbance activities, exposure to COCs in perched/accumulated water via direct contact, incidental ingestion and inhalation are considered incomplete pathways. This perched/accumulated water is not extracted for use on-site or in the immediate vicinity. Shallow water present on-site is discontinuous perched/accumulated water infiltrated from precipitation events. This water has insufficient yield for current and future beneficial use.

Although there are potential non-cancer hazards above the threshold value of 1.0 associated with direct, dermal contact with COCs in perched/accumulated water associated with potential future invasive subsurface activities (construction/excavation), the HHRA concludes that the SMP will manage these limited risks should such activities occur.

B. Ecological Risk Assessment

An Ecological Risk Assessment (ERA), dated August 8, 2007, was performed to evaluate any potential future risks to ecological receptors associated with the aquatic habitat of an unnamed channel on site. Ashland conducted a Screening Level Ecological Risk Assessment (SLERA) using intentionally conservative assumptions, approaches, and parameter values to provide an upper-bound estimate of potential risks. The SLERA concluded: 1) ecological risks are negligible; 2) remediation is not needed on the basis of ecological risks; and 3) the ERA process does not need to proceed further.

C. Cleanup Goals

Target Cleanup Standards (TCS) for the Facility have been identified to be protective of human health and the environment under current and reasonably expected future land use. Both Regional Screening Levels (RSLs) and Mississippi Department of Environmental Quality (MDEQ) Target Remediation Goal (TRG) values are applicable standards and are considered protective. Table 3-1 (attached) from the Revised Final CMS Report shows the TCS for perched/accumulated water that have been approved as part of the Revised Final CMS Report and those monitoring wells that have perched/accumulated water exceeding the TCS.

5. SUMMARY OF ALTERNATIVES

Ashland considered three site-wide Corrective Measure alternatives to address the contaminated soil and perched/accumulated water at the Facility caused by SWMU 4A and AOCs A, C, and E. The three alternatives are discussed in detail in the August 12, 2011, Revised Final CMS Report and include the following: 1) No Action; 2) Institutional Controls (ICs) and SMP; and 3) ICs, SMP, MNA, and inspection and maintenance requirements. The first alternative was rejected because of the need to implement the SMP to protect human health and the environment with respect to possible future subsurface construction or maintenance. The second alternative was rejected because it lacks the ability to measure progress and the attainment of TCS, even though it is a reliable method of mitigating risk in future subsurface activities. The third alternative was selected as the most viable because it provides a way to monitor remedial progress, mitigate risk in future subsurface activities, and is protective of human health and the environment. This alternative is discussed in detail below.

6. PROPOSED FINAL REMEDY

The August 12, 2011, Revised Final CMS Report focused on remedies for contaminated media on a site-wide basis, including both the Facility and the 2-acre off-site contaminated portion of the adjacent Trustmark property. The MNA, ICs, SMP, and Facility inspection and maintenance requirements were identified on the basis of their ability to protect human health and the environment.

The specific components of the MNA, SMP, Environmental Covenant, and inspection and maintenance requirements that make up the proposed Final Remedy for the on-site and off-site contamination are discussed in detail below.

On-site

MNA- The Permittee must continue MNA at the Facility with quarterly monitoring of certain specific wells and annual monitoring of all 27 wells. The frequency for each of the wells is presented in Table 3-1. As part of the MNA program, the Permittee must:

- analyze for well-specific COCs that exceed the TCS, in addition to biochemical parameters, to monitor mechanisms responsible for the continued reduction in the plume extent and concentrations;
- review the MNA remedy by December 2015 to verify that COC trends are stable or decreasing with time; and
- change the monitoring frequency if the EPA determines the concentrations in the perched/accumulated water have changed significantly or if the MNA evaluation shows unsatisfactory progress.

SMP – The SMP, dated January 2008 (included as Appendix D to the August 12, 2011 Revised

Final CMS Report), must be implemented in the event of future subsurface activities. The SMP outlines site management procedures to facilitate a safe and environmentally responsible framework for subsurface disturbance activities at the Facility. A permanent copy of the SMP will be placed at the site and conveyed to the current tenant. The SMP includes the following components:

- a summary of current site conditions and risk evaluations;
- identification of typical current and/or future subsurface disturbance activities that may be conducted at the Facility;
- identification of personnel and contractor responsibilities under the SMP;
- methods to mitigate potential risks to worker health and the environment during subsurface disturbance/maintenance activities; and
- the establishment of general procedures and management guidelines for the proper handling /disposal of soils and or groundwater, and monitoring protocols and contingencies for worker safety and the protection of public health and the environment.

Environmental Covenant – The Permittee must implement an Environmental Covenant to manage and mitigate exposure to contaminated soils and perched/accumulated water exceeding the TCS. The Mississippi Environmental Covenant will: 1) compel continuation of commercial/industrial land use on the property, 2) prevent the use of perched/accumulated water and groundwater, and the installation of wells (with the exception of monitoring wells as part of corrective measures) on the property, and 3) require the implementation of the SMP should subsurface activities ever occur. Once the Environmental Covenant is created and executed, the restrictions must be communicated in writing to the current tenant and posted on-site.

Inspection and Maintenance Activities – In addition to MNA, Environmental Covenant, and the SMP, the Permittee must implement inspection and maintenance requirements at the Facility. The Permittee must inspect the Facility, quarterly and maintain the property fence, gate, signs, concrete surface barrier and asphalt paving, gravel, and landscaped grasses. Posted signs must indicate that Corrective Measures are in place at the site, and list both the covenant-based restrictions (once in effect) and the SMP restrictions. The Permittee must document quarterly inspections in an annual report.

Off- site

MNA – MNA of the off-site contamination is included as part of the on-site MNA program described above. Off-site wells will be inspected under the existing access agreement with Trustmark.

Inspection Activities – In addition to MNA, the Permittee must inspect the Trustmark property on an approximately monthly basis, and report any subsurface disturbances to the EPA.

EPA reviewed the above proposed Final Remedy components for the entire site to evaluate their conformance with the EPA's five (5) corrective measures threshold criteria. The proposed Final Remedy components meet these five (5) criteria for the reasons discussed below.

Overall Protection of Human Health and the Environment: Currently, there are no potential receptors or exposure pathways for the COCs at the closed Facility (Human Health Risk Assessment, dated January 2008). The Environmental Covenant will control land and ground water use. The SMP will mitigate any future risks associated with intrusive subsurface activities and will prohibit or minimize any contact with perched/accumulated water or groundwater use during the MNA treatment period. Any surface removal (such as concrete and soil excavation), and subsurface activities must be performed in accordance with the SMP. Facility personnel will also inspect the Trustmark property on an approximately quarterly basis and report any subsurface disturbances to the EPA.

Attain Media Cleanup Standards: Groundwater data evaluation and statistical analysis shows the presence of natural attenuation. The overall concentration trends show that the COCs in the perched/accumulated water are stable or diminishing with time and that MNA is a reasonable remedy for COCs in the perched/accumulated water at the site. Currently, MNA is successfully allowing site attenuation processes to continue, reducing COC concentrations and the extent of contamination. An MNA evaluation and analysis in December 2015 will determine whether any changes are needed to the monitoring frequency or whether alternative remedies are needed.

Control the Sources of Releases: In the mid-1980s, all underground storage tanks were emptied, cleaned, filled with sand and concrete, and abandoned in-place. All above ground storage tanks were scrapped or moved to another area where they remain emptied and cleaned. In 2009, Ashland ceased Facility operations, removing all remaining sources of contamination, including its RCRA-regulated unit, the Hazardous Waste Container Storage Area (SWMU 1). As a result, all possible sources of release have been eliminated from the Facility.

Comply with Applicable Standards for the Management of Wastes: Perched/accumulated water is not used for any potable or non-potable purpose at the site. Additionally, there are no future plans to access or use the perched water. The management of all investigation-derived waste either: 1) collected from sampling perched/accumulated water, sediment or soils, etc.; or 2) generated as a result of the monitoring program and any future site operations, must be managed in accordance with RCRA.

Short-Term Effectiveness and Long-Term Reliability and Effectiveness: There are no short-term risks to the community with the implementation of the Environmental Covenant, SMP, MNA, or the maintenance and inspection requirements. Implementation of Environmental Covenant and the SMP will mitigate the potential risk to uncontrolled on-site intrusions (e.g. trespasser) and future workers involved in subsurface activities.

MNA of perched/accumulated water exceeding the TCS is expected to eliminate risks associated with COCs on a long-term basis. Current data show dechlorination is taking place and MNA is effective. Site remediation through MNA is anticipated to last 30 years; however, TCS concentrations may be achieved more quickly in the most actively attenuating areas. The effectiveness of MNA will be evaluated in December 2015. If MNA is not effective for the COCs, then the EPA may require Ashland to evaluate and apply other remediation technologies.

The EPA has determined that all practicable remedies have been considered. Of the three alternatives considered, the EPA determined that implementation of the EC, SMP, MNA, and inspection and maintenance requirements site-wide as the Final Remedy are the most protective of human health and the environment.

7. REFERENCES

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Figure 1: Site Location Map



Figure 2: Locations of Current SMWUs and AOCs

